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~~NOFORN~~

Despite widespread media publicity in 1975, almost all aspects of the Hughes Glomar Explorer project are still classified, and it is important that they remain so. The widespread publicity has contained much fact and extensive error. It remains important (b)(1) to protect sources and methods which may have future application.

In the course of continuing litigation related to the project—principally concerning California State tax liability, Freedom of Information Act matters, and a patent infringement claim—several facts about the Glomar Explorer project have been acknowledged in court by the U.S. Government. These include the fact of CIA sponsorship of the project for "intelligence collection purposes"; the participation of Hughes Tool Company, the Summa Corporation, and Global Marine, Inc.; and the actions of senior CIA officials in 1975 to attempt to persuade members of the media not to broadcast or publish reports concerning the project. Beyond these few details, however, it is still firm U.S. Government policy that nothing further about the project is to be said or acknowledged. This prohibition was recently reaffirmed by the President's Advisor for National Security Affairs, the Secretaries of State and Defense, and the DCI. It applies particularly to the specific purpose of the AZORIAN mission; the degree of success; operational details; participation of other contractors, government organizations, and individuals; classified technology; and project funding matters.

The following article is being published because it now is possible to discuss most of the foregoing matters and other classified project details at the SECRET NOFORN level rather than in the TOP SECRET compartmentation which previously applied to all aspects of the AZORIAN project. Nevertheless, there has been no relaxation of the necessity to keep most of the details of the AZORIAN project classified for the foreseeable future.

PROJECT AZORIAN:

THE STORY OF THE HUGHES GLOMAR EXPLORER

(b)(3)(c)

In March 1968 a Soviet submarine of the G-II class was lost with all hands, 16,500 feet below the surface of the Pacific Ocean.

On 8 August 1974 (b)(1) that submarine was brought to the surface in (b)(1) a recovery system designed and developed specifically for that mission.

The story of the more than six years intervening is the story of Project AZORIAN, that is, the story of the Hughes Glomar Explorer.*

AZORIAN ranks in the forefront of imaginative and bold operations undertaken in the long history of intelligence collection. It combined immense size and scope, advanced technological development, complex systems engineering and testing, unusually severe cover and security requirements, a demanding mission scenario in an unforgiving marine environment, the potential for a serious confrontation with the Soviet Union, a difficult and technically unusual exploitation phase, and high cost.

The project became widely known to the media in early 1975. At a time when the Central Intelligence Agency was under investigation by two committees of Congress and many members of the press, the CIA was credited in some newspaper editorials

* The full name of the ship is the MV Hughes Glomar Explorer, as shown in Figure 5. Global Marine, Inc., operates a number of ships with the word Glomar in their names.

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with pursuing its trade craft in a most imaginative manner and doing what intelligence organizations are supposed to do—collect intelligence. Other articles were critical of the project, its cost, and method of operation.

Many senior U.S. Government officials, including three Directors of Central Intelligence, two Secretaries of Defense, two Secretaries of State, and two Presidents, were personally knowledgeable of the program and recognized it as an innovative undertaking of great magnitude and complexity. Key members of four Congressional committees were also kept informed of project progress and reviewed budget requests for the project.

Because the AZORIAN Project was of such huge dimensions in cost, risk, and intelligence value, it sometimes caused difficult problems for the officials who had to make the major decisions affecting it. Some of the questions did not lend themselves to clear-cut unequivocal answers: the intelligence value of the target after six years on the ocean floor, for example, or the political or physical response of the Russians if they should learn of the recovery effort. Because of these difficult questions, there could not be and was not unanimity of opinion among senior officials in CIA, Defense, State, the White House, and other agencies collectively responsible for AZORIAN and the decision on whether or not to proceed. Differences of opinion were expressed and debated in appropriate forums, both before the project was initiated and during its lifetime. These differences are expressed candidly in this article in several places.

In March 1975, columnist Jack Anderson disclosed the existence of the Hughes Glomar Explorer (HGE) project on national television and radio. The original press leak had occurred in the Los Angeles Times in February 1975. The Times story was unspecific, and wrong in important facts, but it gradually developed into a widespread security problem for the program before the Anderson disclosure.

The original leak resulted from an improbable series of events following a break-in and robbery in June 1974 at Summa Corporation headquarters in Los Angeles. It was thought that among the stolen documents there might be a memorandum from a senior Hughes official to Howard Hughes describing a proposed CIA attempt to recover a sunken Soviet submarine and requesting Hughes' approval for Hughes Company participation. Thus it became necessary to brief several persons involved in the investigation in order to protect the document from disclosure if it were recovered. While the source of the leak was never identified, the circumstances became known to reporters who were covering the story and were disclosed in the Los Angeles Times story. Extraordinary efforts by DCI Colby and others were able to contain the spread of the story for a time, but it eventually became widely known in press circles, and Anderson decided to break it.

(b)(3)(c)

This article describes how the Glomar project—code-named AZORIAN, not "JENNIFER" as stated in the press—came about, how it was managed and conducted, and to what extent it met its goal. Subsequent articles will describe how the MATADOR program, and other related issues.

Project Origin

The diesel-powered Soviet G-II-class ballistic missile submarine pendant 72(b)(1) (b)(1) sailed from Petropavlovsk on about 1 March 1968 to take a patrol station

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(b)(1)

MARCH 1968
G-II CLASS
SUBMARINE
16,500 ft
AUG 8TH 1974
RECOVERED

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northeast of Hawaii, off the west coast of the United States, where it would be available for nuclear attack on U.S. targets in event of war. The submarine suffered an accident—cause unknown—and sank 1,560 miles northwest of Hawaii. With the 722 out of contact and overdue, the Soviets undertook a massive two-month search effort covering a broad area from Petropavlovsk to the patrol area northeast of Hawaii. The Soviet search was fruitless. (b)(1)

Senior officials in the Department of Defense and CIA recognized that if it were feasible to devise a plan to recover important components of the submarine, extremely valuable information on Soviet strategic capabilities would be obtained.

Organizing for Recovery

Discussions regarding the feasibility of recovering components of the G-722 took place between technical representatives of CIA and the Department of Defense during the latter months of 1968 and in early 1969. These talks resulted in a letter to the Director of Central Intelligence, Richard Helms, from the Deputy Secretary of Defense, David Packard, on 1 April 1969. Packard, referring to the sunken submarine, asked for a study of what could be done in the next few years to recover significant components. He asked CIA to take the lead. (b)(1)

and designated Dr. John Foster, Director of Defense Research and Engineering (DD/R&E) as the point for coordination. Mr. Helms designated Carl Duckett, Deputy Director for Science and Technology (DD/S&T) as the CIA focal point.

(b)(1)

(b)(3)(c)

(b)(1) During early July 1969 CIA representatives, including John Paragonyk and (b)(3)(c) worked to develop a plan for a coordinated and approved by mid-July 1969 (b)(1) to recover the submarine. This plan was (b)(3)(c)

(b)(1) On 17 July 1969, Helms advised Packard that considerable work had been accomplished (b)(3)(c) to undertake submarine recovery; that Duckett had met with (b)(1) and work was in progress to develop a charter for it, that an Agency task force was studying the retrieval problems associated with the sunken G-II submarine. (b)(1)

(b)(1) On 8 August 1969, (b)(3)(c) outlined to a high-level Executive Committee (consisting of Packard as Chairman, Helms, and the Science Advisor to the President, Dr. Lee DuBridge) the proposed organization for the submarine recovery effort, including structure, management, assets, personnel assignments, and intelligence objectives.

ExCom approved the establishment of the new organization and the allocation of resources and personnel, and agreed that the President should be advised of its establishment. This was done in a memorandum from Dr. Kissinger to President Nixon, which the President approved. Ernest "Zek" Zellmer, a senior CIA (b)(3)(c) official from the DD/S&T, who was a Naval Academy graduate and a submarine officer during World War II, (b)(1) Deputy Director, (b)(1) (b)(3)(c)

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(b)(1)
(b)(3)(c)

agreement describing the organization's detailed responsibilities, management structure, and working relationships was signed by Packard and Helms on 19 August 1969. Among other features, it specified that the staffing of the new organization should reflect the best talent available from the CIA.

(b)(1)
(b)(3)(c)

Security policy and procedures were in accordance with the basic agreement, which placed security management responsibility for the new security system, code-named JENNIFER, with the Director of Security, CIA, acting for the DCI. The Director of Security, in turn, delegated everyday security responsibility to the Chief of the Special Security Center (SSC) at CIA and directed him to establish compartmentation procedures to insulate JENNIFER data from data relating to other programs.

From the beginning, extraordinary security was imposed and clearances severely limited to those with an absolute need-to-know. It was clear at all stages of the AZORIAN Project that it had to be leak-proof to enable the mission to be conducted without diplomatic or physical interference from the Soviets. Therefore, air-tight security and effective cover were of the utmost importance, and project continuation depended upon them completely.

The original CIA task force for Project AZORIAN, established on 1 July 1969 in the (b)(3)(c) became the program headquarters complement, carried in Agency records as the Special Projects Staff, DDS&T. John Parangosky, who had previously held key assignments in the Agency IDEALIST (U-2) and OXCART (A-12) aircraft reconnaissance programs, was named to head this staff. (b)(3)(c) a senior CIA officer and Naval Academy graduate, was appointed as his Deputy.

Development of Engineering Concept

Parangosky initially assembled a small task force of engineers and technicians, who were closeted each day in a large room dubbed the "think tank," to develop an engineering concept to recover the Soviet submarine.

(b)(1)
(b)(3)(c)

Because of the great difficulty and complexity of the recovery problem, the task force called on three security-cleared contractors for early help: (b)(1) for structures and mechanisms; (b)(3)(c) for naval architecture; and (b)(3)(c) for sensors. Principal criteria for the recovery concept were technical and operational feasibility, timeliness of implementation (get the system into the field as soon as possible for an early recovery mission), and reasonableness of cost. The group quickly immersed itself in the problem, fully aware of the challenge of a uniquely difficult task. No country in the world had ever succeeded in raising an object of this size and weight from such a depth.

1. Early Concepts

Three basic categories of lift concepts were considered for use in the early studies: total "brute force" or direct lift, trade ballast/buoyancy, and at-depth generation of buoyancy. Each is reviewed below.

a. Total "Brute Force" (Direct) Lift, referred to as the Rosenberg Winch, involved massive floating winches with wire ropes of the necessary strength to manage

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the total weight of the target object (believed, at that time, to be about 2,000 to 2,200 long tons).

Use of a "drill string" (i.e., a "string" of connecting pipe) was discarded by the task force in the early discussion because it was difficult to envisage how the massive pipe required could be successfully deployed. It was believed at that time that the weight of the pipe alone could not be supported from the surface and still allow enough strength and lifting capacity for the submarine hull section.

b. In the Trade Ballast/Buoyancy concept, buoyant material would be carried to the bottom using excess ballast. On the bottom the ballast would be dropped, generating sufficient positive buoyancy to extricate the target from the bottom and help lift it to the surface.

c. At-Depth Generation of Buoyancy envisaged the generation of gas at depth to create buoyancy to lift the target. Methods reviewed were electrolysis of sea water, cryogenic gases (hydrogen, nitrogen), catalytic decomposition of hydrazine, and chemical generation of hydrogen through the reaction of active metals (e.g., sodium, lithium) or metal hydrides (e.g., lithium hydride).

(b)(1)
(b)(3)(c)

IDEALIST
U-2
OXCART
A-13

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(b)(1)
(b)(3)(c)

JENNIFER
07-01-1969
AZORIAN
PROJECT
INCEPTION

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(b)(1)
(b)(3)(c)

OXB4
B4
[CART!
B4 OX]

8

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(b)(1)
(b)(3)(c)

COURT HOUSE CARNAGE

4. Engineering Concept Selected

By late July 1970, the heavy-lift concept was clearly the favored system to develop for the recovery mission. From that time on, it was given full attention by all appropriate parties. The formal authorization to concentrate studies on the heavy-lift method on (b)(3)(c) September 1970 during a briefing at the Pentagon.

As the engineering concept was being formalized, a deep-ocean mining cover story was beginning to take form to explain all the project activities, particularly those planned for at-sea operations.

Executive Committee Approval

At the 30 October 1970 Executive Committee meeting, [redacted] addressed (b)(1) matter of conceptual development for target recovery. He described the dead-lift (low brute force) concept which would be designed to lift the estimated 1,750-ton target object from the 16,500-foot depth by means of heavy-lift equipment mounted on a large (565' by 106') surface ship. (b)(1)
(b)(3)(c)

MEGATON OBSESSION!

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(b)(1)
(b)(3)(c)

A Deep-SEA MINING VENTURE WAS TO BE USED AS A COVER!

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(b)(1)
(b)(3)(c)

Blue Spandex at noon - Bonneyhead COAL CASINO!

As mentioned previously, a deep-sea mining venture was to be used as the cover story for this operation. To support this theory, a mining device would be constructed which could be handled by the surface ship and mated into its center well. A submersible dry dock was also planned to complete the system.

(b)(1)
(b)(3)(c)

As with all engineering concepts, technical risk areas were involved, and [redacted] identified the major ones. (b)(1)
(b)(3)(c)

They were characterized as being within the state-of-the-art but requiring a major beef-up to handle the weights and pressures involved. The control system was also considered a risk area, but its feasibility had already been demonstrated by another Global Marine ship, the *Glomar Challenger*, which drilled a hole in the sea floor, withdrew the drill bit, and the (b)(1) placed a new bit into the same drill hole in deep water earlier in 1970. [redacted] further (b)(3)(c) pointed out that an extensive simulation program would be conducted to define the dynamic characteristics and stresses of the system. Initial analyses had not uncovered any unexpected or insurmountable problems.

(b)(1)
(b)(3)(c)

All in all, [redacted] at that time estimated the probability of success at about 10 percent, a not very assuring number. (This estimate continued to rise, however, as

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design, development, and testing proceeded. Just prior to the mission, [redacted] (b)(1) the probability of success to be about 90 percent. Helms stated that the ad hoc committee of the U.S. Intelligence Board (USIB) had completed a detailed review of the value of the AZORIAN target on which they had placed the highest priority, and he concurred in their assessment. (b)(3)(c)

Dr. Edward David, the President's Science Advisor, asked [redacted] assurance there was that the desired material [redacted] (b)(1) questioned whether it would be in an exploitable condition when recovered. [redacted] (b)(3)(c)

(b)(1)
(b)(3)(c)(b)(1)
(b)(3)(c)

[redacted] pointed out that there were two basic questions to be answered: should the organization proceed all-out with AZORIAN? If so, where would funding be obtained? Packard answered that not all data on fund availability were known, but that [redacted] nevertheless should go ahead with the AZORIAN project.

Some concluding remarks were made by others at the meeting. Dr. John Foster, Director of Defense Research & Engineering, observed that there appeared to be an underestimation by those present of the value of the target and of the impact AZORIAN would have. (b)(1)
(b)(3)(c)

[redacted] (b)(1) (b)(3)(c) [redacted] commented that he was more confident in regard to this project than to some others because of the thorough work that had been done up to that point.

Packard summed up the proceedings of this meeting and said the consensus was to proceed with AZORIAN. He felt that planning should be done on a (b)(3)(c) level but said it would be necessary to identify possible sources of funding.

(b)(1)
(b)(3)(c)

underestimation of value

(b)(1)
(b)(3)(c)

Recovery Systems Modification

[redacted] reported back to ExCom on 24 March 1971 on technical and design progress of AZORIAN. Total cost now was projected to (b)(3)(c) with the

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principal cost increases attributable to two factors: (1) extended operations to permit more adequate systems testing, and (2) cover enhancement and recomputation of general and administrative expenses. Increases in hardware costs were relatively small.

The Crucial 4 August ExCom Meeting

The next ExCom meeting, on 4 August 1971, proved to be crucial to the life of the project.

Packard opened by stating he considered it necessary to terminate AZORIAN because of the risks involved, escalating costs, and the general budget situation. Nevertheless, he asked [redacted] to brief ExCom on program status.

(b)(1)
(b)(3)(c)

B.S. Active: cover enhancement and recomputation of the general and administrative expenses.

The "other increases" included, for example, modifications of the well area for safety reasons; design and manufacture of a small mining machine for cover purposes; and other contractor cost increases.

There was an extended ExCom discussion of the cost growth problem along with the strained budget status, the anticipated very high intelligence value of the target, and the operational risks. Packard concluded that the project should be continued for a few months, but that [redacted] should consider alternatives in case it were subsequently terminated. This guidance was later expanded to direct a thorough cost review while permitting procurement of long-lead items. However, the keel of the surface ship should not be laid until further approval.

Budgetary Shocks

The 4 August 1971 ExCom meeting was but the first of a number of recurring occasions on which AZORIAN nearly foundered over cost increases and operational risks. Some of the original recovery concepts such as buoyancy lift had been pre-tagged as low at [redacted] the chosen concept was first costed (b)(3)(c) [redacted] (b)(3)(c). In 1970, in less than a year it had jumped more than 50 percent to some [redacted]

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(b)(1)

Small mining machine for cover purposes.

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(b)(3)(c) and another year brought the figure to (b)(3)(c). Each time, however, consideration of the intelligence potential carried the day.

Design and Development of AZORIAN System

By the November 1971 ExCom meeting, substantial strides had been made in design and engineering development of major ship systems, such as the heavy-lift and heave-compensation systems. All details of the pipe-string design also had been completed, and a pipe-string specimen had been fabricated to develop confidence in pipe section fabrication. Design of the large test fixture which would proof-test each 30-foot section of the pipe was nearly complete.

(b)(1)

By the early fall of 1971 Sun Shipbuilding and Drydock Co., Chester, Pa., which had been selected to build the surface ship, was proceeding with fabrication of the docking well gate guides and the temporary bottom structure for the docking well, and preparing to lay the keel.

(b)(1)
(b)(3)(c)

On 4 October, Packard authorized [redacted] to proceed with AZORIAN (b)(1) [redacted] directed that every effort be made to contain costs within the then-refined total program cost of (b)(3)(c) [redacted]

(b)(1)
(b)(3)(c)

In April 1972, [redacted] reported to ExCom that the keel for the surface ship had been laid by Sun Shipbuilders on 16 November 1971 and that the schedule now called for a launch by 5 October 1972 and delivery to the program by 20 April 1973. Further, all long-lead equipment was under procurement and on schedule.

The construction barge was launched in San Diego in January 1972, and reached Redwood City early in May [redacted]

(b)(1)
(b)(3)(c)

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equipment—control center, sensors, and control, power, and data-transmission subsystems—had been completed during FY 1971. (b)(1)

(b)(1) By April 1972, 55 pieces of the pipe string had been poured—(b)(3)(c) [redacted] and final delivery of all 500 pieces at dockside was scheduled for 7 June 1973.

All data-processing functional requirements were defined and documented (b)(1) during December 1971, and the configuration [redacted] computers (b)(3)(c) associated peripheral equipment was put in final form in January 1972. (b)(1)

Managerial Views of Program in 1972 (b)(3)(c)

At the ExCom meeting on 25 July 1972, [redacted] pointed out that AZORIAN had been developed as a one-of-a-kind system intended for a specific job and that because of this uniqueness and the need to accomplish the mission at the earliest possible time, work on the system was proceeding concurrent with design and production. The consequence had been that the amassing of a considerable body of knowledge enhanced the chances of success, but it had also necessitated some costly changes along the way. [redacted] said he expected delivery of the ship in the spring of 1973, and operational deployment in the summer of 1974. He pointed out that recent major changes had driven the total system cost to more than (b)(3)(c). These changes included ship hull strengthening, modification of propulsion shafting, increased electrical capacity, the incorporation of a sewage system to meet new ecological standards, and an improved pipe-string handling process. In addition, a second and more expensive subcontractor had been brought into pipe-string production to meet the tight delivery schedule. [redacted] said construction of the whole AZORIAN system was expected to be largely completed by the end of FY 1973. (b)(1)

Early Political Feasibility Evaluation by 40 Committee (b)(3)(c)

At this 28 July 1972 ExCom meeting, it was agreed that the 40 Committee should be asked for an early evaluation of the political feasibility of conducting the mission in mid-1974, in the light of increasing concern that by that time the developing political climate might prohibit mission approval. On 14 August 1972 Kenneth Rush, who had succeeded David Packard as Deputy Secretary of Defense and thereby as chairman of ExCom, forwarded two documents to the 40 Committee, one an intelligence reevaluation of the submarine target object by the ad hoc Committee of USIB, the other a summary of the program's technical, operational, cover, and security factors. He reported to the 40 Committee in his covering memorandum that AZORIAN was proceeding on schedule [redacted] (b)(1) [redacted] It would reach an agreed cost of (b)(3)(c) [redacted] by 31 August 1972, and was expected to cost (b)(3)(c) [redacted] for completion. In the light of the developing political climate and uncertain budget problems, he said, ExCom was requesting a preliminary political assessment.

On 15 August 1972, Rush forwarded to Helms and David copies of three memoranda relative to the AZORIAN assessment which he had received from the Chief of Naval Operations, Admiral Elmo R. Zumwalt, Jr.; the Assistant Secretary of Defense (Intelligence), Dr. Hall; and DIA Director Vice Admiral de Pok. All three to varying degrees judged that the value of the anticipated intelligence gain from the mission was less than that estimated by the ad hoc Committee, pointed to the escalating costs and political risks of AZORIAN, and generally felt that the program should be terminated. Zumwalt, while not recommending immediate termination,

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40 Committee

VALPARAISO CHILE!

47 CREW 49 HUGHES.

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MV HUGHES GLOMAR EXPLORER

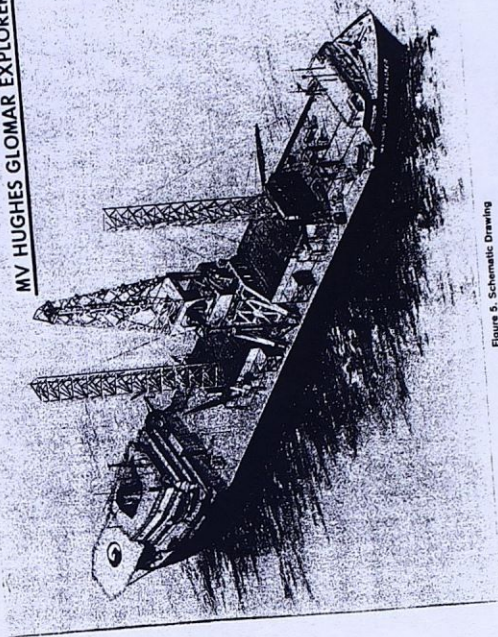


Figure 5: Schematic Drawing

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AVG. SPEED 10.5 K

116" BEAM — WIDTH

After shallow-water tests off Delaware Bay, the ship proceeded to the deep-water test location 80 miles northwest of Bermuda, where the Automatic Station Keeping (ASK) system had its first test in deep water, about ten double sections (500 feet) of heavy pipe were run in the pipe-handling system, and the gimbal platform was put through its first fully operational test. At the conclusion of test activity the ship proceeded to Bermuda for crew change and final preparation and loading for the East-West transit to Long Beach, Calif., around South America via the Strait of Magellan.

Results of East Coast Trials

It was concluded that—except for a few deficiencies—basic ship's systems had performed very well, and the HGE was capable of performing its intended job. The hull was determined to be sound, with no apparent flaws or weaknesses. Major structural assemblies such as the well gate, A-frame, gimbal platform, derrick, and docking legs all appeared to be structurally sound with satisfactory alignment and fit, so that no major structural rework or change in concept of the basic ship's systems was required. For the most part, all existing equipment items operated as designed, although there were several serious deficiencies and many minor ones. Corrective work was scheduled to begin during the transit to Long Beach and early in West Coast work was necessary because the HGE's 116-foot beam was too wide to permit passage through the Panama Canal. A transit crew of 96 persons was decided upon, of whom 47 were regular ship's crew members and the remaining 49 were Global Marine engineers and technicians who used the time in transit to complete a number of fitting-out tasks.

East-West Transit, 11 August–30 September 1973

After completion of East Coast trials, the Hughes Glomar Explorer remained at anchor off Bermuda 9 through 11 August 1973 while a crew change was accomplished and all preparations completed for the 12,700-mile voyage. The ship was planned to take just over 50 days at an average speed of advance of 10.5 knots. The long way around was necessary because the HGE's 116-foot beam was too wide to permit passage through the Panama Canal. A transit crew of 96 persons was decided upon, of whom 47 were regular ship's crew members and the remaining 49 were Global Marine engineers and technicians who used the time in transit to complete a number of fitting-out tasks.

Arrangements were made through the Global Marine agent in Valparaiso, Chile, to carry two Chilean pilots for the transit through the Strait of Magellan. They were to board the HGE in Possession Bay on the Atlantic side, provide the ship safe passage for the 320-mile journey through the Strait to the Pacific Ocean, and ride the ship to Valparaiso for disembarkation.

The replacement crew for the East-West transit was flown to Bermuda from Los Angeles on 10 August 1973. By midday on the 11th, engine modifications had been completed, stores and provisions loaded, and final preparations completed, so that the HGE was under way from the Bermuda anchorage at 1600. Because the ship was government property, there was a senior U.S. Government representative on board as commander—as differentiated from the ship's captain. The commander's responsibility was to ensure that the government's best interests were served even though the ship was in a "white"—i.e., commercial—configuration and the majority of the crew were not witting of the AZORIAN Program. U.S. Government representatives used aliases as they were under tight security cover for the voyage. The HGE's Captain and a few

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47 CREW

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others were briefed and aware of proper actions to take in event of a political incident en route to Long Beach.

Bermuda to Entrance, Magellan Strait, 11 August–5 September 1973

Weather was consistently excellent throughout this leg, although 50 to 60-knot winds and 15 to 20-foot seas were experienced for a brief period while passing through a storm front.

The HGE handled and rode well, a work routine was established, and good progress made on all transit tasks; morale was good, and the marine crew competent and well-organized. Morale was helped by a well-staffed galley (three cooks and two bakers) which produced superb food.

During the latter part of August, news reports from Chile verified that the Allende government was experiencing problems, with the possibility of widespread labor strikes. Although it was considered unlikely, project headquarters developed plans for the possibility that Chilean pilots might not be available for passage through the Strait of Magellan. Additionally, contingency plans were prepared in the event Chilean or Argentine ships showed intentions of interfering with the HGE. Alternative options were prepared for Director, Special Projects, in case passage through the Strait was denied or it was deemed politically inadvisable to go through. These options were: (1) standing off the coast of South America until things settled down, (2) going around Cape Horn into the Pacific, or (3) going east around South Africa, through the Indian Ocean, then through the Pacific. As events turned out, an alternative was not required.

Transit of Magellan Strait, 5–6 September 1973

The HGE arrived at the entrance to the Strait on 5 September, anchored in Possession Bay, and the two Chilean pilots were embarked at 1100 local time. The transit was made without incident, although during the last half of the passage the ship went through a cold front with accompanying 45 to 50-knot winds. This slowed progress somewhat, but the HGE cleared the Strait and entered the Pacific Ocean at approximately 1500 9 September.

Strait of Magellan to Valparaiso, Chile, 6–13 September 1973

Immediately after entering the Pacific Ocean, the HGE ran into extremely heavy weather which slowed its progress again and actually forced the ship to heave to for a short period in 60-knot winds and 25-foot seas. Throughout these conditions, however, the ship handled beautifully, rode well, and its performance was never of concern to the crew. The remainder of the leg into Valparaiso was uneventful, and the ship's crew used this time to complete for Global Marine a list of parts and supplies to be loaded at Valparaiso when the pilots were disembarked. During the few days preceding the 11 September military coup, the ship's commander monitored commercial radio broadcasts as the HGE approached Valparaiso, and he was aware of the increasing tension developing in Santiago and Valparaiso. Nevertheless, he and the HGE's captain, Louis Kingma, did not allow any concern over these events to show in their daily messages to headquarters.

The HGE anchored in the outer harbor of Valparaiso at 2100 local time on 12 September. Shortly after its arrival, a small Chilean naval launch came alongside, and a naval officer and seaman came aboard for discussions with Captain Kingma, at which time the ship was formally entered into the port and Kingma was apprised of the military coup in Chile. Because a curfew was in effect, no further personnel

SECRET

THE CIA
HAD 200
AGENTS TO
OUT ADALC.

(b)(1)
(b)(3)(c)

SECRET

The Glamor Story

movements to the ship could be accomplished that night, but the two Chilean pilots left the HGE with the Chilean naval personnel.

On 7 September, prior to these events, Global Marine's enterprising personnel representative had left Los Angeles for Santiago accompanied by one other Global employee. They brought some 28 boxes of materials and supplies for the HGE, as well as a bag of personal mail. Their principal task was to arrange for the transfer of the supplies and, more importantly, the entry into Chile and transfer to the HGE of seven technicians, all this having been programmed in early August. They arrived in Santiago on 8 September and with the assistance of other representatives, processed the supplies through customs and proceeded to Valparaiso. On Monday, 10 September, Global's representatives traveled to Santiago again to meet six arriving and Lockheed personnel who, along with their tools, luggage, and supplies, were all processed and cleared by Customs. The entire party then returned to Valparaiso and settled in the Hotel O'Higgins to await the arrival of the HGE on 12 September.

At approximately 0600 on 11 September, the Americans were awakened by noise outside the hotel. It was evident the revolution had started, as there were soldiers, tanks, armored cars, and other military vehicles all over the city. The hotel was surrounded, communications cut off, and guests confined to the hotel for the next two or three days. As attested to in his trip report—which reads like a Hollywood script—Tom Williams, the GMI personnel representative, encountered much intrigue and suspense in getting the seven technicians, supplies, and parts loaded on the HGE in the midst of the revolution. Nevertheless, in spite of a curfew, lack of communications, and the general confusion, Williams did a magnificent job of getting to the right people in the new government so that at approximately noon on 13 September, all people in the new government so that at approximately noon on 13 September, all persons and supplies were allowed aboard the HGE, and the ship was cleared to leave Chile for the sole purpose of outfitting Allende. There were no unfavorable incidents involving the ship, crew members, or the Global Marine representative.

Valparaiso, Chile, to Long Beach, California, 13–30 September 1973

This leg of the voyage was completed without incident. The weather was excellent with the exception of two tropical storms that the ship sailed through. Only 21 progressed well, and the HGE made a final report on transit task completions. Only 21 scheduled jobs were not completed due to lack of time. The heavy-lift team which boarded at Valparaiso made excellent progress, following a preplanned work schedule. The HGE arrived Long Beach at 1700 PST, 30 September, and tied up at Pier E without incident. As it was a Sunday evening, the ship's arrival did not attract undue attention; stores were loaded and the relief crew came on board early Monday to conclude the east-west transit phase of the AZORIAN program.

In its transit from the Atlantic to the Pacific, the HGE travelled 12,745 nm in 50 days, 7 hours and 30 minutes, at an average speed of 10.5 knots. A total of 20,643 barrels of fuel were consumed, which equates to 66 gallons per mile.

Mobilization for Mission, October 1973–January 1974

After the East-West transit and arrival at Long Beach on 30 September, the HGE began a period of mobilization for the mission that would end with further systems testing. (b)(1)

24

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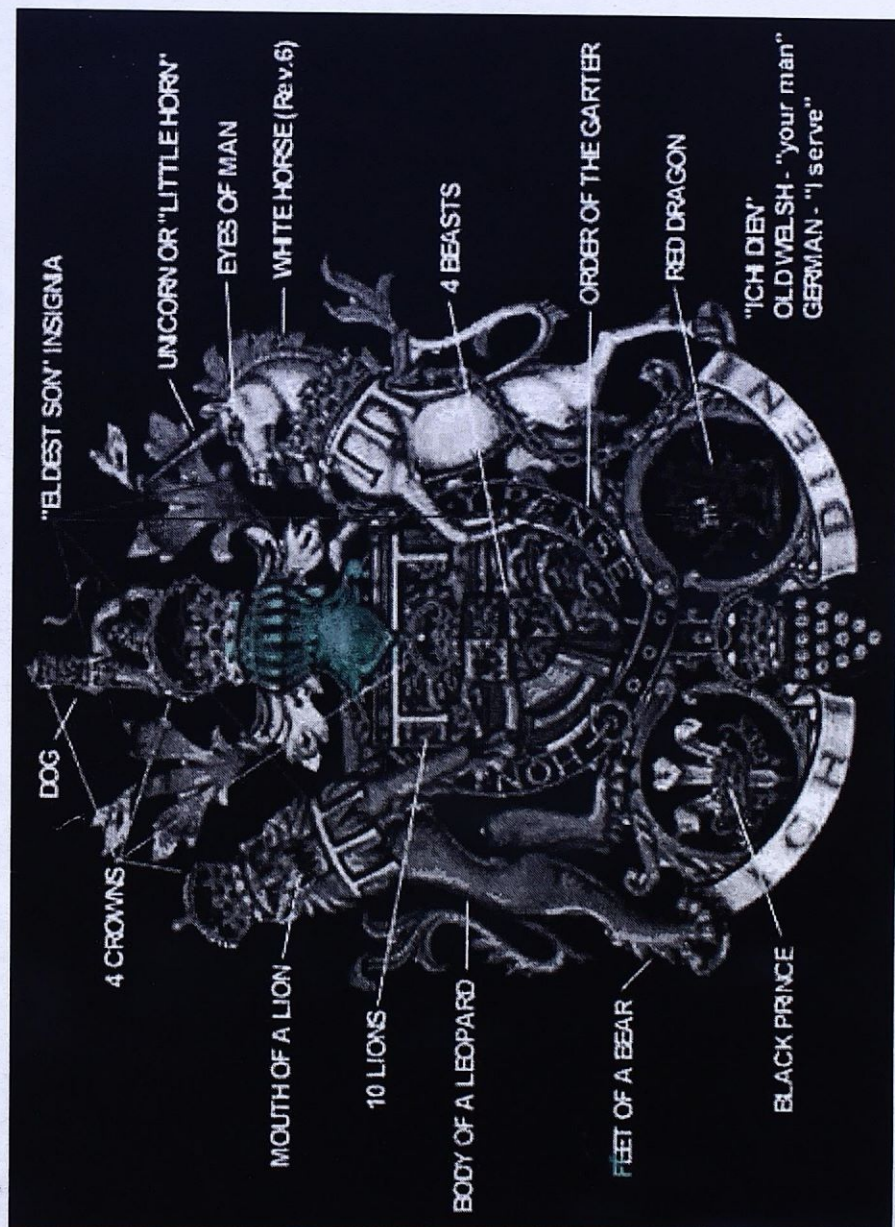
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68 GALLONS PER MILE!

SEPT. / CHILE
11TH / MET
1973 / DOWN
CREW
MORAL
GOOD!

WHICH
PEAS LIKE
A HOLLY-
20,54
BARRE
OK ON
68 G
A mi





BAR 71

An American Grill
100 And A Ave. 241.0938



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+



+



+

PISSING AND MOANING

The 13-year-old boy, named John, (daddy's name) is a "tall, thin, 11-year-old" and "daddy's boy."

The boy, born the day after the 9/11 attacks, is a "tall, thin, 11-year-old" and "daddy's boy."

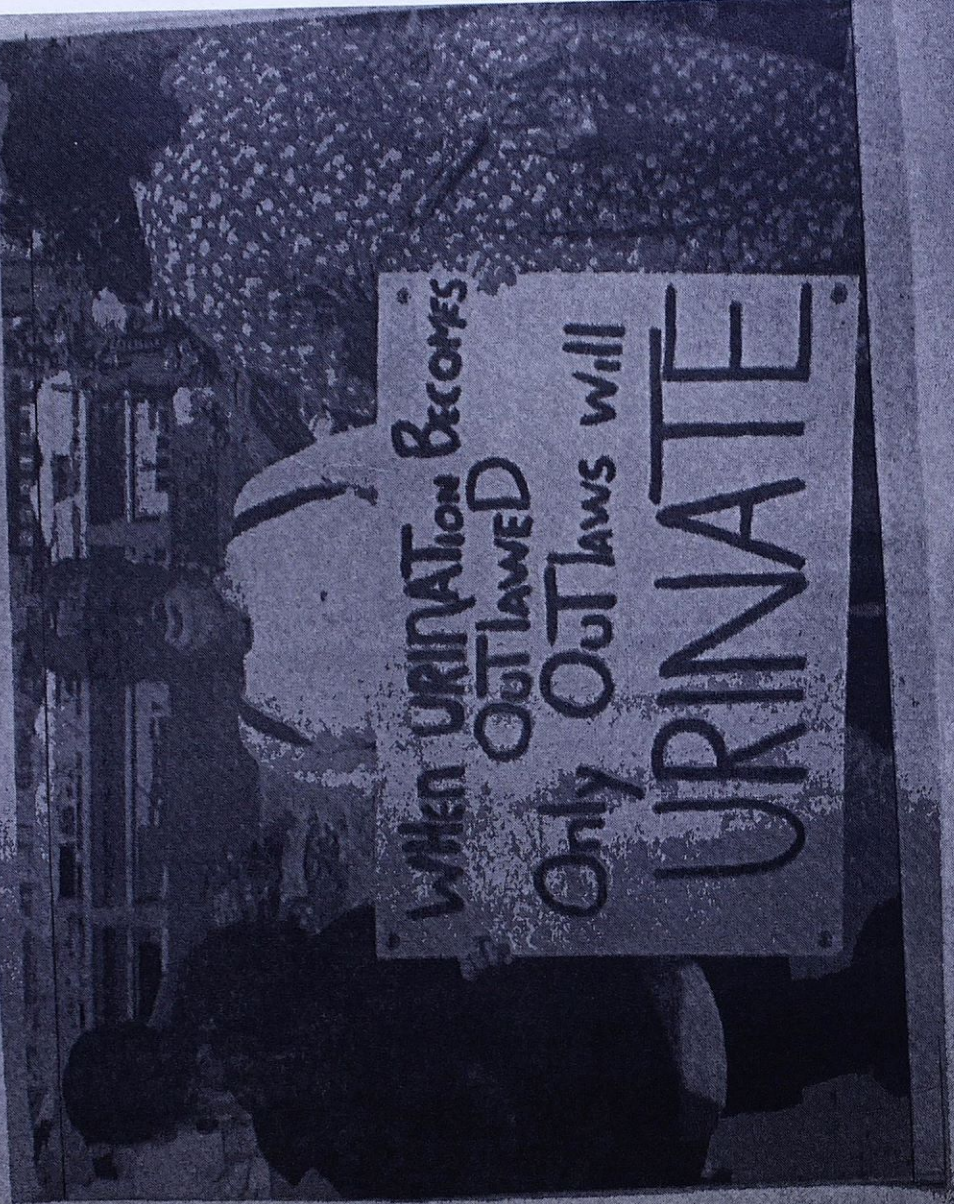
The boy, born the day after the 9/11 attacks, is a "tall, thin, 11-year-old" and "daddy's boy."

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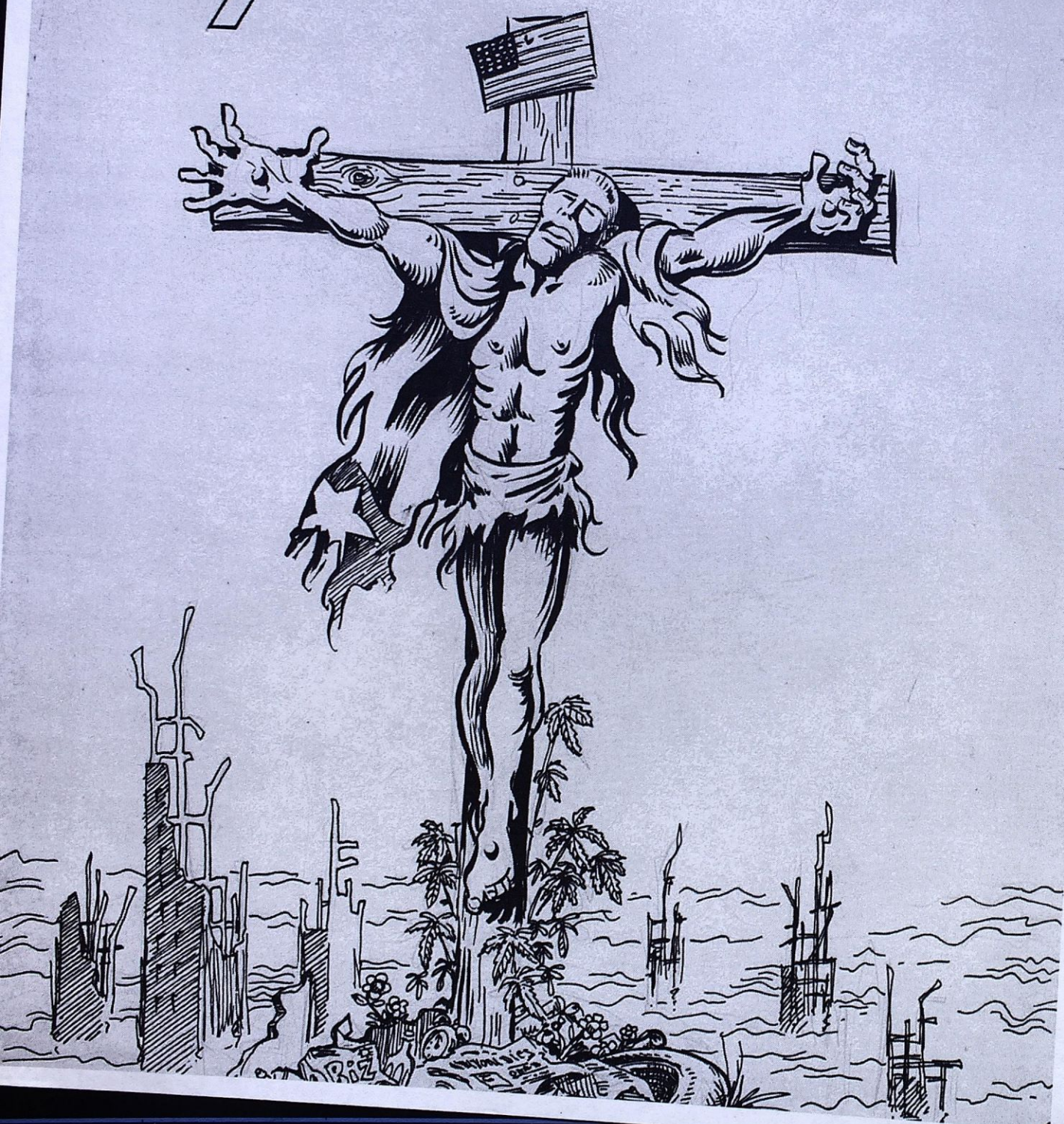
The boy, born the day after the 9/11 attacks, is a "tall, thin, 11-year-old" and "daddy's boy."

WHEN URINATION BECOMES
OUTLAWED
Only Outlaws Will
URINATE.



YOU DO NOT
NEED TO PLAY
LOUDLY TO PLAY
BEAUTIFULLY ♡

Captain Jack



JESUS

IS THE

ANSWER

JESUS ES

LA

RESPUESTA

FD548

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Thumbnails for ABC Sept. 11, 2001 8:31 am - 9:12 am

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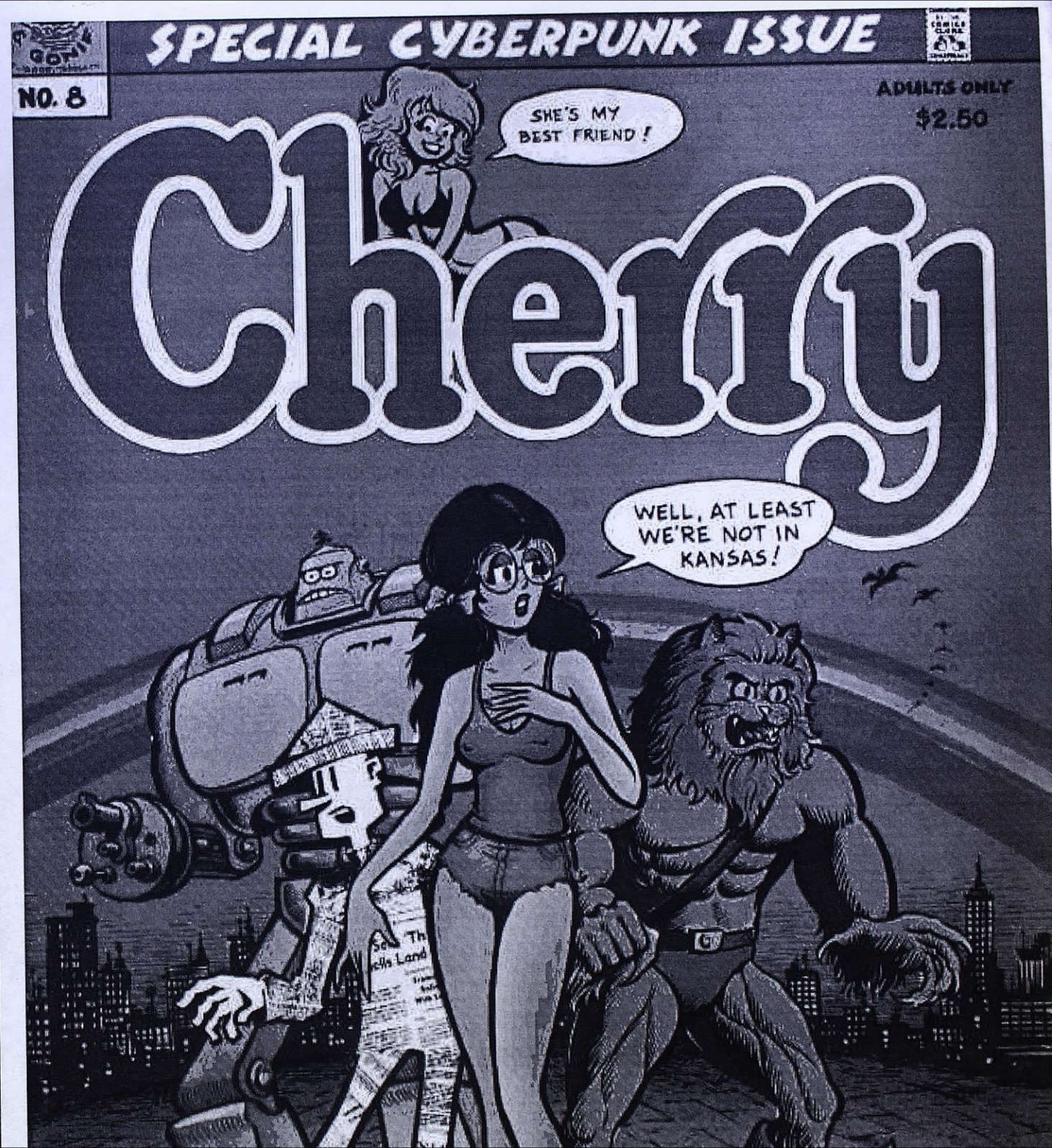
Below are images for every 1 minute in the program.

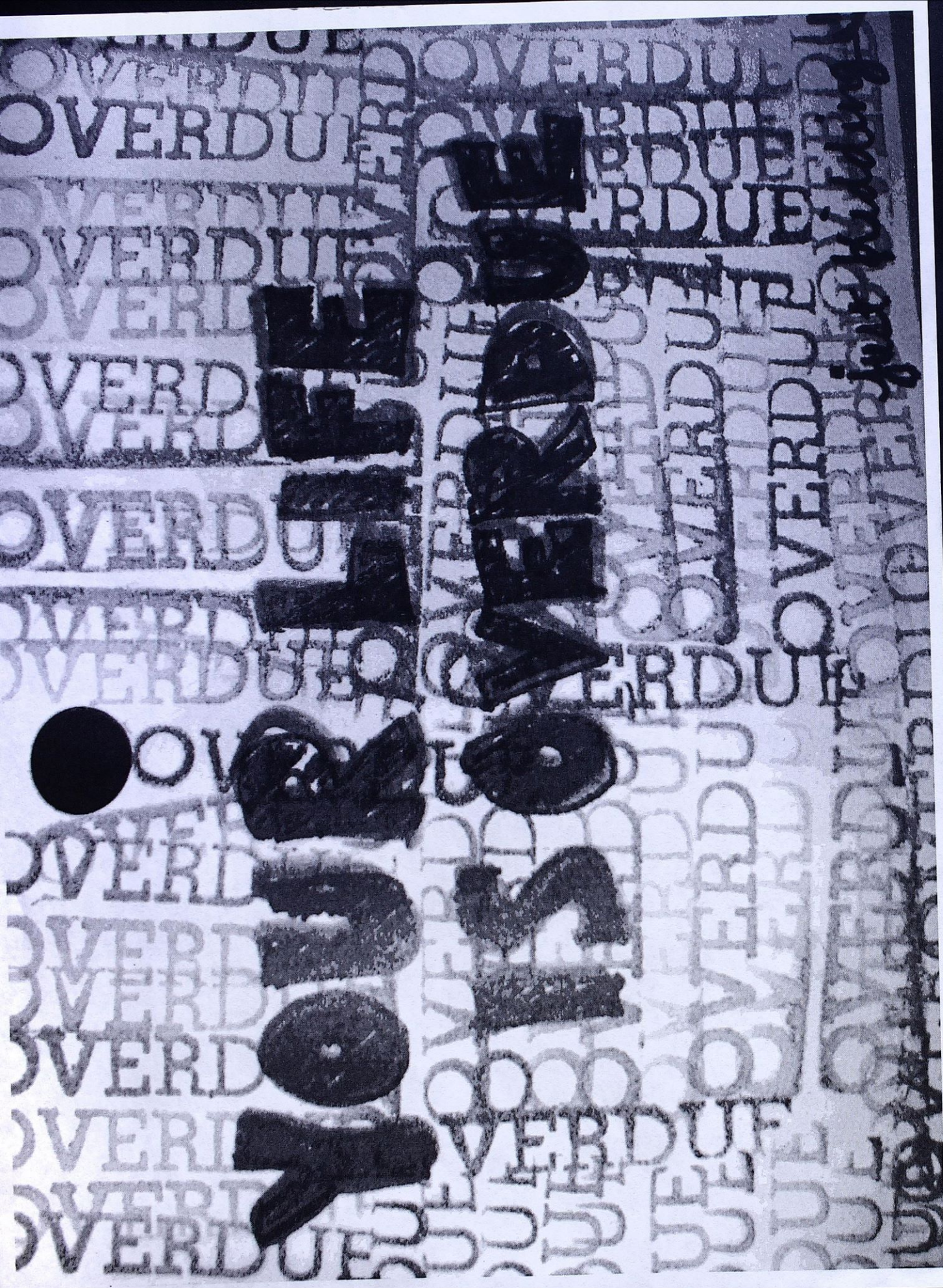


45

The same camera-friendly terrorist is seen here, after unleashing his murderous knife and making threats against all who would not submit before him. His purpose is to create fear in the population, death-squad-like, in order that they would be readily conquered.

Please pr
for the safe
and protection
of these men.





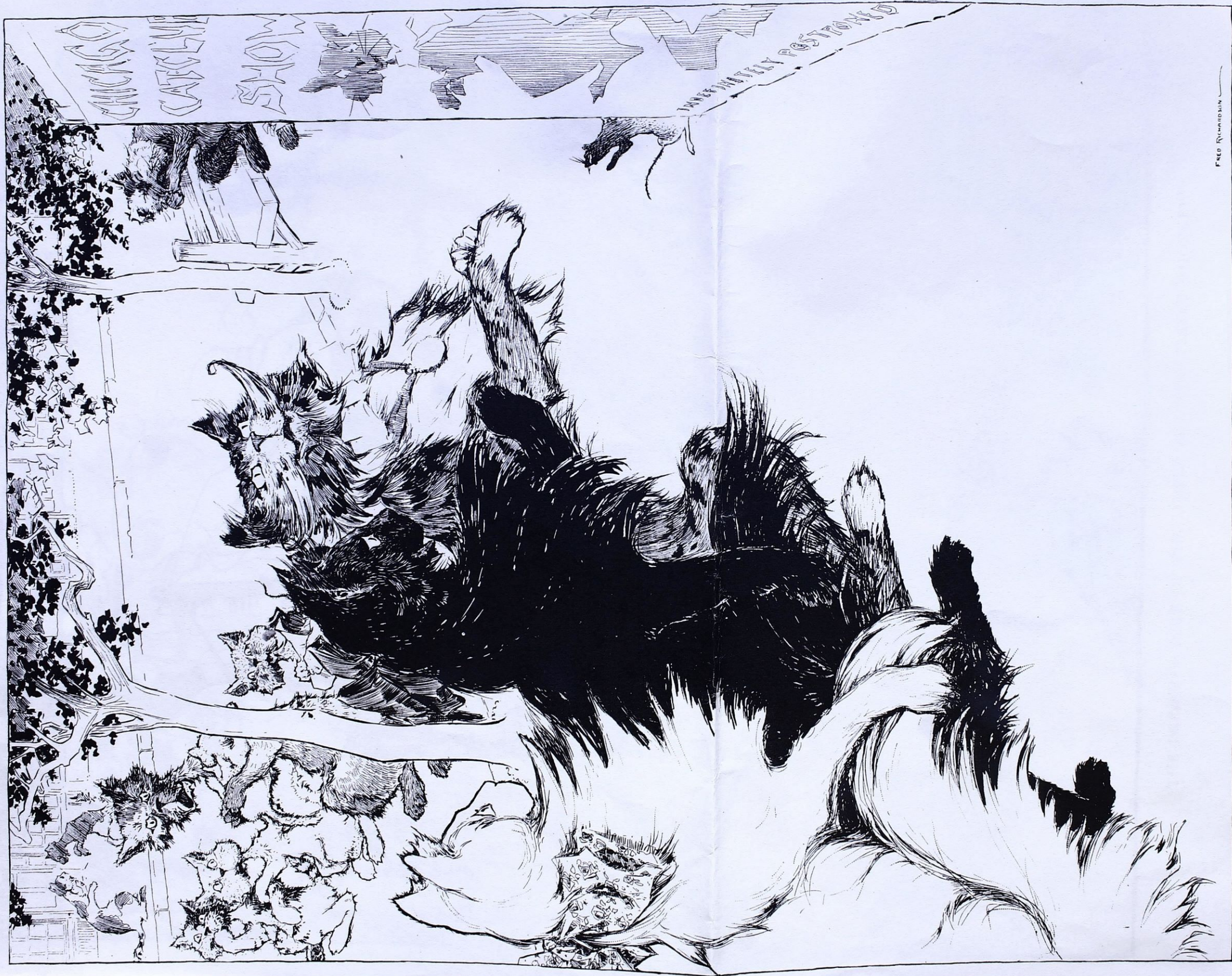




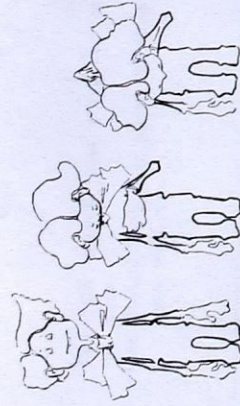
THE DREADFUL FATE OF THE LITTLE BOY WHO PLAYED "HOOKEY"



THE THREE MAGI



MEMBERS OF THE CHICAGO CAT CLUB



HOW TO SPEAK A PIECE WITH PROPER GESTURE AND EXPRESSION

FOR COMMENCEMENT EXERCISES



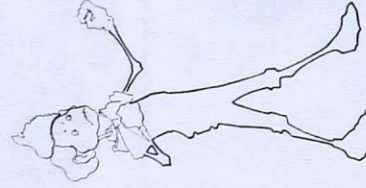
Woodman, spare that
tree!



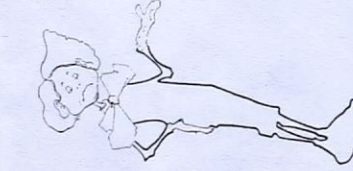
'Twas not a single
bough!



In youth it shel-
tered me,



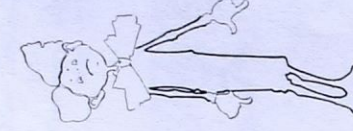
And I'll protect it
now.



'Twas my fore-
father's hand



That placed it near
his cot;



There, woodman,
let it stand;



Thy ax shall harm it
not!



That old familiar
tree,



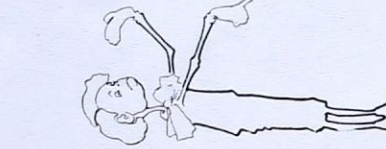
Whose glory and
renown



Are spread o'er land
and sea,



And wouldst thou
hew it down?



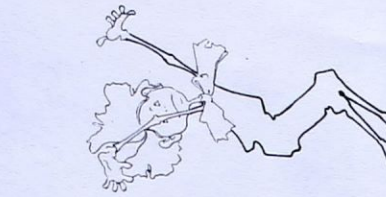
Woodman, forbear
thy stroke!



Cut not its earth-
bound ties;



Oh, spare that aged
oak,



Now towering to the
skies!



When but an idle
boy,



I sought its grateful
shade;



In all their gush-
ing joy,



Here, too, my sisters
played.



My mother kissed
me here;



My father pressed
my hand—



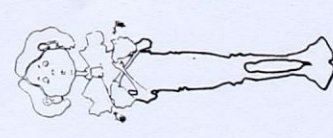
Forgive this foolish
tear,



But let that old oak
stand!



My heart-strings
round thee cling,



Close as thy bark,
old friend!



Here shall the wild
bird sing,



And still thy branches
bend.



Old tree! the storm
still brave!



And, woodman,
leave the spot!



While I've a hand
to save,



Thy ax shall harm
it not.

THE TEN LITTLE COUNCIL BOYS

Ten little council boys going out to dine;
One choked himself on plums and then there were nine.



Eight little council boys shooting seven-eleven;
One sprung some loaded dice and then there were seven.



Seven little council boys sawed wood and said nix;
One sawed his pull in two and then there were six.



Six little council boys kept a gambling dive;
The grand jury nabbed one and then there were five.



Five little council boys shouting for the floor;
One worked his jaw loose and then there were four.



Four little council boys at a ward-building bee;
One got in another's ward and then there were three.



Three little council boys all in a stew;
One tumbled in the soup and then there were two.



Two little council boys for re-election run;
One took the Salt Creek route and then there was one.



One little council boy living all alone;
He got honest and then there was none.

